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ON SOME LITTLE-KNOWN HABITS OF THE WOODCOCK.

By the Editor.

Not many years ago it was currently believed by sportsmen that no Woodcocks remained in the British Islands after the end of winter, except perhaps a few wounded birds, which were unable to cross the sea to their usual breeding-places. Nor is this notion yet altogether exploded, so difficult is it to controvert preconceived ideas which have once firmly taken hold of the public mind.

It is, of course, perfectly true that the greater proportion of the Woodcocks which are found here by sportsmen during the shooting season are winter visitants, which arrive in October, and which, if not killed, would leave the country again in March or early in April. But it is equally the fact that a large number of Woodcocks annually remain here to pair and nest in suitable localities.

Mr. A. G. More, in his valuable remarks in 'The Ibis,' "On the Distribution of Birds in Great Britain during the Nesting Season," observes that the nest of the Woodcock is by no means so rare as is generally supposed. The bird is reported as breeding occasionally in nearly every county throughout England and the South of Scotland. Farther north it becomes more numerous, and may be considered to breed regularly from Perthshire

northwards to Caithness.* There is no doubt that many more birds remain to breed now than formerly; and this increase appears to be owing to the great extent of country which has been covered with plantations during the past few years, particularly, according to St. John, with fir plantations. †

What reason, asks Selby, is to be assigned for this change in their habits? Is it to be attributed to a change in our seasons, or are we to look for it in the great increase of woods or plantations, so general over all the island, affording these birds additional and secure retreats, as well as an abundant and constant supply of food?‡ The late Sir William Jardine attributed the circumstance to the increased attention paid to Ornithology, and to such facts being recorded; he could not perceive any change in the country to induce the birds to remain more frequently than heretofore.§ Another reason may be found in the circumstance that now many owners and lessees of manors do not allow their coverts to be disturbed in the spring, and give orders to their keepers to spare the Woodcocks after a certain date.

Mr. T. Monk, of Lewes, some years since was at considerable pains to obtain statistics as to the number of Woodcocks remaining to breed in the eastern division of Sussex; and, extraordinary as it may appear, the conclusion he arrived at was to the effect that in seven districts of East Sussex, comprising twenty-one parishes, there were annually, on an average, from one hundred and fifty to two hundred nests of this bird. ||

It is not, however, with the question of nesting that we are now concerned, but with the singular habit which this bird has of carrying its young under certain circumstances—a habit which has been placed beyond doubt by the testimony of many competent observers, and which has been very beautifully depicted by Mr. Wolf in the accompanying illustration. The observation of this habit is by no means new. Scopoli, in his 'Annus Primus Historico-Naturalis,' long ago remarked upon it, and several

* Mr. More might also have added Ireland, since several instances of the Woodcock breeding there are mentioned by Thompson (vol. ii., p. 247), and many others have since been recorded.

† 'Wild Sports and Natural History of the Highlands,' p. 264 (ed. 1878).

‡ 'Mag. Zool. and Bot.,' i. p. 201.

§ 'British Birds,' iii. p. 171 (Naturalist's Library).

|| The statistics collected were subsequently published in 'The Field' of 25th February, 1871.

writers since his time have discussed the subject. Gilbert White, on reading Scopoli's statement "*pullos rostro portat fugiens ab hoste*," was incredulous. "But candour," he added, "forbids me to say absolutely that any fact is false, because I have never been witness to such a fact. I have only to remark that the long unwieldy bill of the Woodcock is perhaps the worst adapted of any among the winged creation for such a feat of natural affection." Had Scopoli omitted the word "*rostro*" his statement might have been less open to criticism, the fact being that not one of the subsequent observers who have confirmed his assertion that Woodcocks *do* carry their young agrees with him that they are carried *in the bill*. Nor do they upon this point agree amongst themselves.

The late L. Lloyd, in his 'Scandinavian Adventures,' wrote, "If in shooting you meet with a brood of Woodcocks, and the young ones cannot fly, the old bird *takes them separately between her feet*, and flies from the dogs with a moaning cry." Again, in his 'Game Birds and Wildfowl of Sweden and Norway' (p. 194), he thus refers to the habit as observed by a friend:—

"'Once during a hare-hunt,' writes my friend, M. Anders Oterdahl, 'I myself shot a Woodcock, flushed by the dogs, and when flying at about six feet from the ground, that was bearing an unfledged young one *in her claws*. It seemed to me she grasped it with her feet, one foot having hold of one wing and the other foot of the other. Though, owing to intervening branches, I did not observe the old bird when she rose, I was fortunately so near to her as clearly to see what I have stated. Afterwards I found two other young ones under a neighbouring bush, where they had retreated for safety.' When the above story appeared in my former work, 'Scandinavian Adventures,' it was looked on by many, both in Sweden and England, as a fable: but, from the number of similar instances since recorded, it is now, I believe, received as an admitted fact in both countries that Woodcocks, when their young are in jeopardy, not unfrequently thus convey them to a place of safety."

One of the brothers Stuart, who, in the second volume of the 'Lays of the Deer Forest,' have given such a graphic account of the wild animals of Scotland, from personal observation of their habits, thus refers to the bird now under discussion:—

"The Woodcock breeds to a considerable extent in most parts of the forest, and also in other woods of Morayshire, the Aird of Inverness, and on the Dee, the Don, the Spey, and other parts of the Highlands, but,

within our knowledge nowhere so numerously as in Tarnaway. Without any search, and merely in the accidental occasions of roe-hunting, we have found, in one season, nineteen nests with eggs. It would, however, be more proper to say 'beds,' rather than 'nests'; for, like those of the Plover, they are merely slight hollows formed by the nestling of the bird's breast in dry soft spots, or on the fallen leaves. They generally lay three eggs, sometimes four, and occasionally, but rarely, five, and never that we have known beyond that number. The eggs are surprisingly large in proportion to the bird, and of a brown colour, variegated, like the young, with beautiful clouded tints. Like all the larger ground-birds, they run as soon as they are hatched, which is early in the spring; and in May I found a brood of five, so large that I could only catch the smallest, and that with difficulty. As the nests are laid on dry ground, and often at a distance from moisture, in the latter case, as soon as the young are hatched, the old bird will sometimes carry them *in her claws* to the nearest spring or green stripe. In the same manner, when in danger, she will rescue those which she can lift. Of this we have had frequent opportunities for observation in Tarnaway. Various times, when the hounds, in beating the ground, have come upon a brood, we have seen the old bird rise with a young one *in her claws*, and carry it fifty or a hundred yards away; and, if followed to the place where she pitched, she has repeated the transportation until too much harassed. In any sudden alarm she will act in the same way. One morning I had been sitting for some time on the grey stone of the 'Braigh-clach-liath,' ruminating with my eye fixed unconsciously on the ground, at the dry leafy foot of a cluster of those tall slender birches which, at that time, formed one of the most beautiful features of the terrace: as my thoughts became less intense, and the mind had exhausted its action upon the subject by which it had been abstracted, the eye grew more sensible, and I was aware of another large black eye which was fixed upon mine from the bed of brown leaves before me. I could distinguish no form, no colour distinct from them: in fact, the leaves seemed to look at me. I approached nearer and nearer, but could discover nothing but the large, round, dark eye fixed intently upon mine. I was at a loss what to think: if the eye closed, I felt that there would be nothing left to prove that what I then saw was one of the clearest and most intelligent eyes I had ever beheld, when suddenly the little, round, light-brown head of a young Woodcock peeped out from what now became visible as the back of its mother, whose eye it was which had caused me so much astonishment. The little head disappeared again, and immediately afterwards the diminutive bird came out from the feathers of the old one's breast, bearing half its shell upon its back, and uttering that plaintive cry for which language has no sign. I retreated softly to my stone, but trod upon a long dead branch which lay concealed under the moss, and the extremity stirring the leaves and dry

sticks near the Woodcock, she rose, and trailing her wings along the ground, pattered round the stump of the birches, but stopped as she heard the wail of the little bird, which was running about like a tiny ball of brown chenille. In the nest there were two more eggs unhatched, but out of one I saw a little sharp bill and half of another small head peeping through the shell, and to relieve the anxiety of the *madre*, therefore, I immediately turned from her retreat, and dived down the terrace into the wood. Near the place where I found her there was a soft green 'stripe,' such as Woodcocks love. I had no doubt the family would be there next day; and as I passed near I turned aside to see what they were doing. Upon a dry bank, half-way down the brae, I almost stumbled over a bird which rose at my feet; and as it darted through the trees I saw that it had something in its claws, and at the same time I heard the plaintive cry of the little Woodcocks just under my feet. I looked down; there were two: and I thought a hawk had carried off the third, and perhaps killed the mother. I saw the bird light, as hawks very often do, especially in a close wood, when they have just caught their prey, and are impatient to satisfy their appetite. I sprang down the bank, determined, if I could not save the little victim, to spoil the hawk's breakfast. I flushed the bird so suddenly, that, after a low flight of only a few yards, it dropped what it was carrying, and instantly lighted not half-a-dozen paces distant. I ran to pick up the mangled prey, when to my surprise I found a vigorous little Woodcock running about as nimble and active as its *madre* could wish. I looked for the hawk, but in his stead saw the old Woodcock, in great consternation, trailing her wings as if wounded, and busy to attract my notice. As soon as I followed, she led me away, hirpling and halting like an 'old wife,' taking little flights, which became longer as she drew me farther; till at last, thinking she had sufficiently succeeded, she took a turn down the brae, rose over the trees, and wheeling back dropped on the spot where she had left her charge. I gave her a little time to find him, which was not difficult, as he continued to call her as loud as his tiny bill could pipe. In a few moments I ran forward, and she rose with him *in her feet*, her long legs dangling and swinging with her little burden like a parachute. She lighted at no great distance, and as I again came upon her she got up, but in her hurry dropped the young bird. I instantly stopped, for she came to the ground almost at the same time with the little one, and she ran back and sat upon him, and rose again with him *in her claws*. I left her to pursue her flight in peace, and went on to my pass; but I have no doubt she went back for the other two, for, several times afterwards, I saw them all together in the soft green 'glac.'"

This very circumstantial account from so good an observer leaves no room for doubt in the mind of the reader, but an

independent observation by another equally good naturalist may be quoted for the purpose of showing that the young are carried in another and a different manner to that already described, and that they are thus transported, not only to escape their enemies, but for the purpose of obtaining food, which, in their unfledged state, they would be unable to procure at any distance from the nest. Charles St. John, in his 'Natural History and Sport in Moray' (p. 210), says:—

"I have again seen the old Woodcocks carrying their young down to the soft, marshy places to feed. Unfitted as their feet appear to be for grasping anything, the old birds must have no slight labour in carrying their whole family (generally consisting of four) every evening to the marshes, and back again in the morning. They always return before sunrise. Occasionally I have come upon a brood of young Woodcocks in a dark, quiet, swampy part of the woods, near which they have probably been bred. In a case of the kind we may suppose that the old birds are saved the trouble of conveying their young to a distant feeding-place; but as the young birds are frequently hatched in long heather in dry situations, and far from any marshes, they would inevitably perish in the nest were they not daily carried backwards and forwards by their parents. The quantity of worms required to sustain one of these birds would astonish those town-bred naturalists who gravely assert that the Woodcock 'lives on suction.' * * * * As soon as the young are hatched, the old birds are obliged to carry them to the feeding-ground, which is often at some distance. The young, though able to run immediately, are tender helpless little things, and could by no means scramble through the tangled heather and herbage which often surround their nest, perhaps for many hundred yards. It long puzzled me how this portage was effected. That the old birds carried their young I had long since ascertained, having often seen them in the months of April and May in the act of doing so, as they flew towards nightfall from the woods down to the swamps in the low grounds. From close observation, however, I found out that the old Woodcock carries her young, even when larger than a Snipe, *not in her claws*, which seem quite incapable of holding up any weight, but *by clasping the little bird tightly between her thighs, and so holding it tight towards her own body*. In the summer and spring evenings the Woodcocks may be seen so employed passing to and fro, and uttering a gentle cry, on their way from the woods to the marshes. They not only carry their young to feed, but also, if the brood is suddenly come upon in the daytime, the old bird lifts up one of her young, flies off with it fifty or sixty yards, drops it quietly, and flies silently on. The little bird immediately runs a few yards, and then squats flat on the ground amongst the dead leaves, or whatever the ground is covered with. The

parent soon returns to the rest of her brood, and if the danger still threatens her, she lifts up and carries away another young bird in the same manner. I saw this take place on the 18th May; the young were then larger than, or fully as large as, a Snipe."

Here it will be observed that the narrator doubts the feasibility of any other mode of transport than that which he himself witnessed.

Thompson, in his 'Natural History of Ireland' (Birds, vol. ii. p. 253), refers to a keeper who believed that he had seen the old hen carrying off her young when suddenly disturbed. Under the impression of his having been deceived in the matter, he several times followed hens apparently thus burthened to where they alighted, and saw them run off without any young bird being there. It is, he says, the body behind the wings, the tail, legs, and feathers of the belly, that she droops down in a peculiar manner, that gives the appearance of a young bird being clutched up. He was several times quite near to birds presenting the appearance here described.

St. John's account of the mode of transport, however, has been confirmed by other observers. A correspondent writing from Rostrevor, Co. Down, in August, 1871, says:—"On the 2nd of this month I started a brace of Woodcocks close to me. One of them had a young one *pressed between its breast and feet;* it lighted on the ground again after rising, apparently to get a better grasp of its young one, and then flew off with it. They were near the edge of a wood in the afternoon and during sunshine." Another correspondent, writing from Rohallion, Birnam, says:—"This spring (1871) I have been witness repeatedly to the ability of the Woodcock to carry its young, and fly off with them, *pressed to its body by its legs.* This was in May and June."

Another method of transport is that referred to by Mr. W. Colquhoun (Dumbartonshire), who says:—"I have seen a Woodcock carry its young, but it was *by pressing it between its legs.*"

Again, Mr. A. Hamond, jun., of Westacre, informed Mr. Stevenson that when in company with a friend and a gamekeeper, at Shielda, near Dingwall, in Ross-shire, he saw a Woodcock in the act of carrying a young one *in its claws* for some distance.

The old bird then returned and clucked about like a hen to draw the rest of the brood to her. His friend had observed the same proceeding on several occasions.*

Thus it is placed beyond doubt that the Woodcock is able to transport its young, in various positions, from place to place, not only when flying from its enemies, but also when going out to feed and returning.

This curious habit is not confined to the European Woodcock, but, according to Audubon and others, has been observed also in the American species. More recently, too, it has been witnessed in England in the case of the Common Snipe. A well-known sportsman who has adopted the pseudonym of "Idstone," writing in 'The Field' of 30th May, 1874, says that on the 22nd of the same month, when crossing a marsh on his way to a trout stream, a Snipe rose almost at his feet, "and there was attached to it, mostly on its left or near side, a young Snipe, which it carried, or which clung to it, for about twenty-five yards." He could distinctly see the markings on the young one, and is therefore positive that he was not mistaken. The locality was close to Laurence's Mill, Morden, Dorsetshire. In the same number of 'The Field,' Mr. John Titterton, of Ely, Cambridgeshire, states that a similar thing was observed near Ely, also in May of the same year.

These observations confirm our impression that, while the old birds are able to carry their young in two or three different positions, that which has been so skilfully depicted by Mr. Wolf, in the accompanying plate, is probably the one most commonly employed.

* 'The Birds of Norfolk,' vol. ii. pp. 292, 293.

MR. E. R. ALSTON ON THE BRITISH MARTENS.

[At the last scientific meeting of the Zoological Society a paper was read by Mr. Alston "On the Specific Identity of the British Martens." The subject being one which has especial interest for naturalists in this country, it is believed that the publication of Mr. Alston's remarks in this journal will be appreciated by many who would not otherwise have an opportunity of perusing them. We need hardly say that should any of our correspondents be in a position to examine specimens of British-killed Martens, whether recent or otherwise, by the light of Mr. Alston's observations, we shall be glad to receive their criticisms.—ED.]

"Two European species of Martens," says Mr. Alston, "have been generally recognised by naturalists since the days of Albertus Magnus and Agricola, although some writers, including Linnæus himself, regarded them as identical. It is only of late years, however, that their specific distinctness has been finally proved; and, before considering the question of the identity of the British Martens, it will be well to point out the true synonymy and diagnostic characters of the species in question, concerning which some confusion still appears to exist.

Several systematic writers, especially in Germany and America, have assigned the Linnean title *Mustela* to the Martens, instead of to the more truly typical Weasels, on the ground that this had been done by Cuvier. But the names *Putorius* and *Mustela* were only employed by the great French zoologist to mark *sous-genres*, and were not used binomially to indicate distinct genera.* The first definite separation was made three years later by Nilsson, who gave the generic title of *Martes* to the present group;† and thus both priority and propriety sanction the restriction of the name *Mustela* to the true Weasels and Ermines. There has also been some difference of opinion as to the specific name which should properly be given to the *Mustela martes* of Linnæus. Many writers have employed *abietum*, apparently on the ground that it was used as a varietal name by Linnæus himself. This, however, is not the case: the varieties *abietum* and *fagorum* were

* 'Règne Animal' (1re éd. 1817), i. pp. 147, 199.

† 'Skand. Fauna' (1st ed. 1820), i. p. 41. The genus *Martes* has been quoted by Lilljeborg and some others as instituted by "G. Cuvier, 1797;" this error appears to have originated in a misunderstanding of the French plural *Martes* in the 'Tableau Elémentaire.'

not accepted by him; he merely says that such a distinction was recognised by the peasants.* Moreover, if *abietum* be used, the universally known name of *foina* for the allied species would have to be withdrawn in favour of *fagorum*. The earliest equivalent to *Mustela martes* appears undoubtedly to be Nilsson's *Martes sylvatica;* and the synonymy of the two species should therefore stand thus:—

I. Martes sylvatica (The Pine Marten).

Mustela martes, Linnæus, Syst. Nat. (12th ed.), i. p. 67 (1766).
Martes sylvatica, Nilsson, Faun. Skand. (1st ed.), i. p. 41 (1820).
„ *vulgaris*, Griffith, Cuvier's An. Kingd., v. p. 123 (1827).
„ *abietum*, Fleming, Brit. Animals, p. 14, ex Ray (1828).
„ *sylvestris*, Nilsson, Faun. Skand. (2d ed.), i. p. 171, ex Gesner (1827).

II. Martes foina (The Beech Marten).

Mustela foina, Erxleben, Syst. Reg. An., p. 458 (1777).†
Martes foina, Nilsson, Faun. Skand. (1st ed.), i. p. 38 (1820).
„ *fagorum*, Fleming, Brit. Animals, p. 14, ex Ray (1828).

The cranial and dental characters by which *Martes sylvatica* and *M. foina* may be recognised were first pointed out by Dr. R. Hensel in 1853,‡ further elaborated by Blasius in 1857,§ and recently revised by Dr. Elliott Coues in comparison with their American congeners.‖

"At various times," adds Mr. Alston, "I have carefully compared the descriptions of these writers with a great number of skulls; and although many of the distinctions which they have pointed out are merely comparative, and though some of them prove to be inconstant when a large series of specimens are examined, yet I have never found the slightest difficulty in

* "Varietas duplex rusticis: *Fagorum* gutture albo; *Abietum* gutture flavo." Syst. Nat. (12th ed.), i. p. 67.

† Dr. Elliott Coues, in his 'Fur-bearing Animals' (p. 77), gives *M. foina* as nstituted by "White, Phil. Trans. lxiv. 1774, 196," having seemingly been misled by some reference to Gilbert White's celebrated Monograph of the House Martin, *Hirundo urbica!*

‡ 'Arch. f. Naturg.,' xix. 17—22, pl. ii.

§ 'Säugeth. Deutschl.,' pp. 211—219.

‖ 'Fur-bearing Animals,' pp. 74—80, pls. iii., iv.

separating the species by the following external and internal characters:—

Martes sylvatica.—Outer fur rich dark brown, under fur reddish grey, with clear reddish yellow tips; breast-spot usually yellow, varying from bright orange to pale cream-colour or yellowish white. Breadth of the skull across the zygomatic arches rather more than half the length; the arches highest posteriorly, whence they slope rather suddenly downwards and forwards. Sides of muzzle nearly parallel; anterior opening of nares oval; postorbital process about equidistant between the frontal constriction and the anterior root of the zygoma. Palate comparatively narrow, with a distinct azygos process on its posterior margin. Upper premolars placed regularly in the line of the series; the fourth as long as the upper molar is broad, its inner cusp large and placed nearly at right angles to the axis of the tooth. Upper molar broader than long, its flattened inner portion considerably longer and larger than the outer part; in the latter the external tubercle fills the space between the anterior and posterior tubercles, *so that the external outline of the tooth is simply convex*, not *emarginated*.* First lower molar with a slightly developed inner tubercle at the base of the main cusp.

Martes foina.—Outer fur dull greyish brown, under fur greyish white; breast-spot smaller than in *M. sylvatica*, pure white. Breadth of the skull across the zygomatic arches much more than half the length; the arches regularly curved, broadest and highest near their middle. Sides of muzzle slightly converging; anterior opening of nares broader than in *M. sylvatica*, heart-shaped; postorbital process nearer to the frontal constriction than to the anterior root of the zygoma. Palate comparatively broad, truncated posteriorly. Upper premolars crowded, and often placed diagonally, their anterior extremities being directed inwards; the fourth considerably longer than the upper molar is broad; its inner cusp smaller, and placed more diagonally than in *M. sylvatica*. Upper molar subquadrate, its flattened inner portion hardly longer or larger than the outer part, in which the external and anterior tubercles are placed close together, *the external outline of the tooth being distinctly emarginated* between them and the*

* We have italicised Mr. Alston's words here, in order to indicate a character upon which especial reliance is placed. In the 'Proceedings of the Zoological Society,' from which we quote, the skulls of both species are figured.—Ed.

posterior tubercle. First lower molar with a well-developed inner tubercle at the base of the main cusp.

As Blasius has remarked, the differences of proportion are less conspicuous when a skull of an aged example of *M. foina* is compared with that of a young *M. sylvatica* than when individuals of the same age are contrasted; nevertheless they are always present to an appreciable degree. In his figures Blasius has represented a further distinction, in the form of the transverse ridges of the soft palate; but I have not had an opportunity of testing the constancy of this feature; nor have I sufficient materials for any original observations on the distinctive marks of the American and Siberian Martens, as to which I can only refer the reader to the descriptions of Drs. Coues† and Middendorff.‡ On the whole, it may be said that the most striking and trustworthy of the characters enumerated above are, *externally*, the colour of the under fur, and, *internally*, the comparative breadth of the skull and the shape of the upper molar.§

Having thus cleared the ground as to the synonymy and distinguishing marks of the two European Martens, we come to the question *whether both of them inhabit our own islands.* Every work hitherto published on the British fauna has either stated or assumed that both forms are natives; and almost every one has represented the white-breasted *Martes foina* (the Common Marten of the Continent) as being also the prevailing species in Britain. Several, however, of our best zoologists have expressed grave doubts as to the specific distinction of the two forms, or have even denied that they could be separated as constant varieties. This will be evident from a glance at the pages of the principal writers on the subject.

Passing over the older writers, who merely copied the accounts of Gesner and Aldrovandus, we may come at once to Pennant, who describes *Mustela foina* as 'The Martin,' distinguishing 'The Yellow-breasted Martin' as a distinct species, of which he says

* 'Fur-bearing Animals,' pp. 59–96, pls. ii., iv.

† 'Reise in Sibir.,' ii. Th. ii. pp. 68, 69, pl. ii. figs. 1—6.

‡ It should be observed that Dr. Severtzoff has stated that our European Martens are "not fully differentiated" in Eastern Turkestan, and has described some skins which he saw there as a new species, *Mustela intermedia* (Turkestanskie Jevotnie, p. 80; Ann. and Mag. Nat. Hist., 4th ser. xviii. p. 46); but as he obtained no skulls, much weight cannot be laid on his observations.

that it 'is found in *Great Britain;* but is much less common in *England* than the former; it is sometimes taken in the counties of *Merioneth* and *Caernarvon*, where it is distinguished from the other kind by the name of *bela goed*, or Wood Martin, it being supposed entirely to inhabit the woods, the *bela graig* to dwell only among the rocks. Though this is so rare in these parts, yet in *Scotland* it is the only kind; where it inhabits the fir forests, building its nest at the top of the trees.'*

Pennant was followed by subsequent writers without much additional information being supplied. Thus Bingley states that the 'Common Martin' is 'not very uncommon in many of the southern parts of Great Britain and Ireland;' while 'Pine Martins are sometimes, though rarely, observed in the wooded and thinly inhabited districts of Wales and Scotland, and two or three of the northern counties of England.'†

Fleming gives the habitat of *Martes jagorum* as 'In woods and rocks in the south of Scotland and England;' that of *M. abietum*, 'in the wooded districts of Wales and Scotland;' but adds that 'the characters of these two species are ill-defined.'‡

The Rev. L. Jenyns, in his excellent 'Manual,' considered that *Mustela foina* was 'more generally diffused' than *M. martes*, which, he says, 'inhabits the fir-woods of Scotland: occurs also sparingly in the West of England.'§

Edward T. Bennett, then Secretary of the Zoological Society, discussed the question of the distinctness of the Beech and Pine Martens in 1835, evidently inclining to the belief that they were specifically identical, and referring two British specimens then in the Society's Museum to the former and two others to the latter race.‖ What was the ultimate fate of these examples I know not; but it is to be remarked that no exact localities are mentioned, and that the supposed 'Beech Martens' had 'dirty-white breasts:' not improbably they were faded specimens.

Two years later appeared the first edition of Mr. Bell's standard work, in which he gave separate figures and descriptions of the two Martens, but 'with the precaution of a protest against being

* 'British Zoology' (1768), i. p. 81.
† 'Mem. Brit. Quad.' (1809), pp. 164, 169.
‡ 'Hist. Brit. Anim.' (1828), pp. 14, 15.
§ 'Man. Brit. Vert. An.' (1835), p. 11.
‖ 'Gard. and Menag. of the Zool. Soc.' (1835), i. pp. 227—240.

considered as decidedly supporting the opinion that they are essentially different.' No new information was here given as to the supposed distribution of the animals in this country.* In Scotland, however, the elder Macgillivray had better opportunities for observation, and a comparison of specimens convinced him of 'the indivisibility of the species.' Young specimens, he says, have yellow throats, and are the Pine Martens of authors; while 'in old individuals the whole fore-neck and part of the breast are white, or greyish white, or pale grey mottled with brownish. The yellow colour on the throat fades in specimens kept in Museums, so as at length to be scarcely perceptible.'† In Ireland, W. Thompson came to similar conclusions, observing that 'all the native specimens which have come under my own notice were yellow-breasted (*Martes abietum*), with the exception of one, which had the breast white (*M. foina*), and was killed in the county of Antrim.' He adds that he had long since remarked that the yellow colour gave place to white with advancing age, and explained the greater number of yellow-breasted specimens obtained by their comparative immaturity.‡

The author who has most recently treated of the question is Mr. Bell. In his revised second edition of the 'Quadrupeds' he fully accepts the specific distinction of the two forms, regarding which he was formerly so doubtful, and quotes a letter from Mr. R. T. Vyner, who 'concludes that the Beech Marten is at present much less common than the Pine, and is, indeed, very nearly extinct in England, which is accounted for by its habit of leaving its summer haunts of woods and rocky places, to inhabit, in the winter, farm buildings, faggot-stacks, and other similar localities, and thus becoming exposed to various means of destruction. The Pine Marten, on the contrary, continues to inhabit, at all seasons of the year, its accustomed retired haunts, rarely, if ever, intruding into the immediate purlieus of human habitations.'§

It will thus be seen that the later and better-informed English faunists gradually approached agreement as to the existence of

* 'British Quadrupeds,' 1st ed (1837), pp. 167—176. [Reference might also be made here to a paper by Mr. Eyton, 'Ann. Nat. Hist.' 1840, p. 290.—Ed.]

† 'Brit. Quadr.'(Nat. Libr. xx. 1838), pp. 166—173.

‡ 'Nat. Hist. Ireland' (1856), iv. p. 9.

§ 'British Quadrupeds,' 2nd ed. (1874), p. 212.

only one species of Marten in Britain, and that some of them drew the natural though erroneous deduction that *Martes sylvatica* and *M. foina* were specifically identical. The fact is, as I believe, that *M. foina* is not, and never was, a member of the British fauna. During the last ten years I have missed no opportunity of examining native Martens, and have endeavoured to trace out every supposed 'Beech Marten' that I could hear of. I have thus seen a very large number of specimens from various parts of England, Wales, Scotland, and Ireland; and *every one* has proved to be the Pine Marten. The late Mr. Blyth, who paid some attention to this question, assured me, shortly before his death, that his investigations had led him to the same result; and I have been unable to find any competent observer acquainted with the true characters of the species, who has ever seen an authentic British-killed specimen of *M. foina*. Macgillivray and Thompson were certainly correct in saying that the pale-chested individuals which have usually received that name in this country are merely aged examples of the Pine Marten, or specimens which have faded in museums. Nor does there appear to be the slightest evidence in favour of Mr. Vyner's suggestion that *M. foina* has been recently exterminated in this country. Such a fate has not overtaken the species on the Continent, where it holds its own fully as well as its ally; and a subfossil skull found in Burwell Fen, Cambridgeshire, and exhibited to the Zoological Society in 1873, by Mr. J. W. Clark,* is certainly referable to *M. sylvatica*. The true Beech Marten is undoubtedly a more southern species than its congener, finding its northern limits in Denmark and the Baltic Provinces; for Professor Lilljeborg has proved that it is not, as had been stated, a native of Sweden.† Until an authentic British specimen has been produced, it must also, I think, be struck out of the lists of the British fauna.

I will conclude with a few remarks on the present distribution of the Pine Marten in Britain, much of the information being gleaned from the pages of 'The Zoologist.' Although greatly reduced in numbers by persecution, it still maintains its ground in the wilder districts of Scotland, the North of England, Wales, and Ireland, and occasionally specimens are killed in counties where the species was thought to have been long extinct. In

* 'Proceedings Zool. Soc.,' 1873, p. 790.

† 'Sverg. og. Norg. Ryggradsdjur,' p. 535.

Scotland it is still found, though comparatively rarely, in the Lews and in most of the Highland mainland counties, being perhaps most abundant in Sutherland and Ross-shire, especially in the deer-forests. In the Lowlands a Marten is now a very great rarity; but a fine example was killed in Ayrshire in the winter of 1875-76. In the North of England, Mr. W. A. Durnford says, the species is 'still plentiful' in the wilder parts of Cumberland, Westmoreland, and Lancashire;* and in Lincolnshire several have been recorded, the latest, killed in 1865, by Mr. Cordeaux.† In Norfolk one was shot last year;‡ and I have myself examined a fine example, which was shot in Hertfordshire, within twenty miles of London, in December, 1872. In Dorsetshire the last is said to have been killed in 1804;§ but a specimen occurred in Hampshire about forty years ago;‖ and another in Surrey in 1847. A Marten is said, by the Rev. C. A. Bury, to have been 'seen' in the Isle of Wight;¶ and one was recorded from Cornwall, by Mr. E. Hearle Rodd;** but this proves on investigation to be an error, the specimen having been brought from North Wales, where Martens appear to be still not very rare. In Ireland the following counties were enumerated by Thompson as habitats of this species:—Donegal, Londonderry, Antrim, Down, Armagh, Fermanagh, Longford, Galway, Tipperary, Cork, and Kerry.†† The *Cat-crann* is probably now a rarer animal in Ireland than it was when Thompson wrote; but it still exists in various districts, especially in the County Kerry, whence the Society has received several living examples; and Professor A. Leith Adams states that it has been seen of late years even in the County Dublin."‡‡

* 'Zoologist,' 1877, pp. 291. [See also Parker, Zool. 1879, p. 171.]

† 'Zoologist,' 1866, p. 242. [Not quite the latest; others have since been recorded; Zool. 1877, p 251, and 1879, p. 420.—Ed.]

‡ F. Norgate, 'Zoologist,' 1879, p. 172; J. H. Gurney, *tom. cit.* p. 210.

§ J. C. Mansel-Pleydell, *tom. cit.*, p. 171.

‖ P. L. Sclater, 'Zoologist,' 1845, p. 1018.

¶ 'Zoologist,' 1844, p. 783.

** Id., 1878, p. 127.

†† 'Natural History of Ireland,' iv. p. 9.

‡‡ 'Proceedings of the Royal Society of Dublin,' 1878.

THE BIRDS OF DUBLIN AND WICKLOW.

By H. L. Cox, M.B.

In the following notes I do not propose to give a full list of all the birds that have been met with in the counties of Dublin and Wicklow; but merely to collect, in a readable form, a few rough notes relating to those which I have observed myself during the last seven or eight years. These I hope may prove of use and interest to other ornithologists.*

Peregrine Falcon.—I once saw one on the east side of Ireland's Eye. It allowed me to get within seventy yards before it flew. This was in September, 1877.

Merlin.—Seen two or three times at Lough Dan, at Howth, and on the Sugar-loaf. I have never found it breeding, though I saw it at Lough Dan in April and May, 1875.

Kestrel.—Numerous in both counties in suitable localities. A pair breed at Lough Dan almost every year. They used to nest on Bray Head; but I think they have been frightened away. They may be seen about Howth and Ireland's Eye during the spring.

Sparrowhawk.—By far the commonest hawk in Dublin and Wicklow. I have often seen it in the streets of Dublin during the winter.

Common Buzzard. — I saw one in April, 1875, between Annamoe and Lara; it was hovering about a bare piece of mountain, about a mile up the river from the latter village.

Barn Owl.—Generally distributed.

Long-eared Owl.—Found in all suitable localities. I have seen it near Blanchestown, and shot one on the canal between that place and Dublin, at No. 8 Lock. I have also met with it in Wicklow, near Roundwood and at Enniskerry.

Short-eared Owl.—Occurs chiefly in autumn and the early part of winter. I have seen three, at different times, on the sand-hills at the North Bull. I shot one there on December 6th, 1872. I met with another on the South Bull in November, 1877, during a stiff breeze.

* In 'The Zoologist' for 1866 (pp. 93, 295, 479) will be found some "Ornithological Notes from the County Dublin," by Mr. Blake-Knox; and at pp. 220, 300, of the same volume, an account of "The Migratory and Wandering Birds of the County Dublin," by the same pen.—Ed.

Water Ouzel.—Observed on almost every stream south of Dublin, but not on any of those on the north side. I have seen it also on every stream that I have fished or walked along in Wicklow. Although it may not be met with on the Dodder close to Dublin, yet on its tributaries, at Rathfarnham, several may be seen any day. I have taken the eggs in Wicklow.

Missel Thrush.—Common, and breeds abundantly. A pair generally brings out a brood in the Park, Trinity College. During the past winter its numbers were greatly reduced by the severe weather; scarcely one is now to be seen.

Redwing.—Common during the winter. I obtained one as late as May 1st, out of a flock near Dunsink. These were the first birds that suffered during the hard weather; five days after its commencement they could be caught with a cap.

Fieldfare.—A regular winter visitor. These birds on the seventh or eighth day of the hard weather (1878-79) had been so much weakened by the snow and frost that I caught two of them. Three or four days later I found dead ones.

Song Thrush.—Common everywhere, and increases during the autumn; these remain all winter, unless it is very severe. I am afraid this bird is also nearly extinct after last winter.

Blackbird.—Common everywhere, particularly on the north side of Dublin. They come into the town in hard weather in considerable numbers. I have snared four or five in a yard in Eccles Street during snow or frost, and often a couple in open weather. Like Thrushes, they increase in numbers during the winter.

Ring Ouzel.—On May 5th, 1875, when fishing in the River Annamoe, about a mile above Lara, one flew down the side of the hill and settled on the root of a dead tree within fifteen yards of me. I had a walking-stick gun with me, but by the time I took it off my basket and had it almost loaded the bird flew off.

Robin.—Common. I once saw a variety with white wings.

Wheatear.—Numerous in certain places. On its first arrival numbers may be seen near the Pigeon House Fort, and also on the shore from Dollymount to Dublin. Late in the season, before leaving us, they congregate on the North Bull.

Whinchat.—I shot one of these birds on May 9th, 1875, on the side of the road from Roundwood to Annamoe, about half a mile from the latter place; but it was so mangled that it was not worth preserving.

STONECHAT.—Numerous, and breeds in suitable localities. I have taken the nests near Roundwood and at Howth.

WHITETHROAT.—Somewhat local. When walking up the canal towards Blanchestown, or in the neighbourhood of the Tolka, it may often be seen and heard. There many other spots, too, where it may be found.

WILLOW WREN.—Abundant in both counties, and may be heard from the first week in April for six or seven weeks. The Wood Wren has occurred at Glen Druid, Co. Dublin, but I have not met with it myself.

CHIFFCHAFF.—Not so numerous as the Willow Wren, but still a common bird.

SEDGE WARBLER.—Occurs along every stream, canal, and river, where there are reeds or willows, and cover of this description.

GOLDEN-CRESTED WREN.—Numerous, but seems more abundant in early spring than at any other time.

GREAT TIT.—I have met with this bird in almost every part of the two counties; but it is nowhere very numerous. I have seen it at times in the squares and gardens in Dublin.

BLUE TIT.—Common everywhere, even in Dublin. Those seen in town are generally very shabby, being covered with soot.

COLE TIT.—Nearly as common as the Blue Tit; in some places more numerous.

PIED WAGTAIL.—Frequent, though less numerous than in the North of Ireland, preferring the neighbourhood of the sea.

GREY WAGTAIL, *Motacilla sulphurea*, Bechst.—Common. I have found a pair every few hundred yards, in the spring, along the streams in both counties. It is particularly numerous on the Tolka, the Dodder, and the stream that runs through Bray. It is more generally distributed, and in the spring much more numerous, than the Pied Wagtail.

SPOTTED FLYCATCHER.—A scarce bird, but every year certain places are frequented by a pair—possibly the same pair, as they seem to use the same twig to sit on and watch for their prey.

RAVEN.—On several days during the month of April, 1874, I saw a Raven wheeling about above the mountains on the shores of Lough Dan.

CARRION CROW.—I saw a pair of birds on the evening of the 24th May, 1878, which I suspect were Crows. They were in an

old elm tree at the corner, opposite a grave-yard, beside one of Mr. Ion Trant Hamilton's gates. When I first saw them they were moving about near the top. They flew out several times, and when on the wing uttered a hoarse croak, deeper almost than that of a Raven; then, sailing round, alighted again and again. At last they took fright and flew off, and although I often visited the spot afterwards I never saw them again. These are the only birds I have met with that could be Carrion Crows.

Hooded Crow.—This bird I have seen once or twice on the Wicklow Mountains in the spring, but oftener on the sea-shore in winter, though seldom more than two or three at once.

Rook.—Met with everywhere, even in Grafton Street, if one is up early enough to see it. They destroyed an immense number of small birds during the hard weather last winter, and in this way they fared well, chiefly at the expense of Thrushes and Redwings.

Jackdaw.—Common. In the spring they come into Dublin, and make use of any blind chimneys they can find to build in.

Magpie.—I have observed this bird in both counties, but nowhere abundant when compared with some parts of Ireland.

Starling.—Common, and increasing annually. This increase is most remarkable in the winter flocks.

Greenfinch.—Numerous and generally distributed.

Linnet.—Pretty common in suitable localities. During winter large numbers may be found all along the coast.

Lesser Redpoll.—This bird is far less common here than in the North of Ireland. A few pairs breed every year near Dunsink. I have also found the nest in different parts of Wicklow, and in the County Dublin, but nowhere abundant.

Twite.—I have often shot this bird on the North Bull during the winter, amongst flocks of other small birds, and also near the Pigeon-House Fort. It breeds near the foot of the Dublin Mountains, though I have never visited its breeding haunt. In December, 1878, it was numerous all along the coast.

Goldfinch.—Seldom seen in either county. In the neighbourhood of Rush and Lusk I have observed one or two during the winter, and have occasionally heard one in other parts of the county. I met with them near Finglass once or twice, and once saw a pair near Enniskerry, always in the autumn or winter.

Siskin. — Observed every winter, but I have never come across a flock of more than five or six. They may be heard almost any day in winter along the valley of the Tolka, though not always seen, as they are generally on the other side of the river. I shot a hen bird on March 15th, 1878, in this neighbourhood. Near Donnybrook Chapel I have seen them during winter; and near Bray, and in other places, I have occasionally seen a solitary one. I fancy that some of them breed in Powerscourt, as I have heard one or two there on June 23rd and also on July 1st, 1878, when I happened to be there.

Chaffinch.—Our commonest bird. It is met with everywhere, and in some places in large numbers.

Sparrow.—Common. There is a periodical migration of these birds from and to the city of Dublin. They disappear soon after the young birds are full grown, and do not return until about the end of October or beginning of November, when nice clean, fresh-looking Sparrows are to be seen for a short time; but they soon lose their clean appearance, and become regular town birds again. I have several times seen pied varieties in the streets.

Common Bunting.—Found in suitable localities, and numerous near the sea-coast from Dollymount to Malahide. In the winter, usually, a few may be seen near the Pigeon-House Fort and North Bull.

Yellowhammer. — Common in suitable localities in both counties. It seems to have withstood the late severe winter almost better than any other bird.

Black-headed Bunting.—Local. I have seen it near Baldoyle, Malahide, and also in Wicklow.

Snow Bunting.—Hitherto I have considered this bird a regular winter visitor; but last winter I did not come across a single specimen. In 1872 there were some hundreds in a flock on the North Bull, where there were always a few to be seen until the winter of 1877-78. I have twice seen them as late as the first week in May. In 1876 and 1877 these birds were frequently to be seen between the Coastguard Station and the Pigeon-House Fort; there were five the first year and two the second. They were very tame, allowing approach within five or six feet of them.

Bullfinch.—This bird is getting scarce, particularly on the north side of Dublin. In 1871 and 1872 I used to see a good many, but since then they have either been destroyed or have

left, being hardly ever seen except on the south side of the city towards the mountains.

Sky Lark.—Common, increasing considerably in numbers in winter.

Meadow Pipit.—Common everywhere.

Rock Pipit, *Anthus obscurus*, Lath.—This is a scarce bird, even in suitable localities. I have seen it all along the coast of both counties, but nowhere numerous. The Meadow Pipit outnumbers it, even on Ireland's Eye, where one would imagine it would be in a majority.

Tree Creeper.—I have met with this bird in every wooded district. It is easier found in spring, being then more vociferous.

Wren.—Numerous everywhere.

Cuckoo.—In variable numbers every spring.

Kingfisher.—I have seen this bird on the Liffey and almost every stream north of it. It is found, as a rule, on the same rivers as the Dipper, preferring the more sluggish streams. During the autumn I have often observed them along the sea. On the Clontarf shore, in October and November, they are not rare; nor at Malahide and other places. The numbers seem to have been much thinned during the past winter.

Goatsucker.—This I believe to be a very scarce bird. In May, 1875, I heard one near Lara almost every night for about three weeks, but could never see it. I know that they also come regularly to Bray, but I never could see or hear them there.

Swallow.—A regular summer visitor.

Sand Martin.—Also a regular visitor, but in limited numbers.

House Martin.—More numerous than the Sand Martin, but only in suitable localities. Amongst other places, they breed along Howth and Bray Head.

Swift.—A regular summer visitor. Very common in Dublin, where it may be both seen and heard any day when breeding under the slates of a house, and may be heard crawling about and squealing almost all night long.

(To be continued.)

OCCASIONAL NOTES.

The Zoological Station at Naples.—The Zoological Station at Naples has undertaken the publication of a new Zoological Record, in which equal attention will be paid to all departments of Zoology. A large staff of zoologists of various nationalities will act as recorders under the editorship of Prof. J. V. Carus, of Leipsig; and the first volume, dealing with the literature of the current year, will appear in 1880. All those engaged in zoological work on any group of the Animal Kingdom are invited to send a copy of their papers to Prof. J. V. Carus, Leipzig, Querstrasse 30, and to write on the address "for the *Jahresbericht*." Papers so sent will be distributed by Prof. Carus amongst the recorders, and, after being abstracted for the Record, will be deposited in the Library of the Zoological Station at Naples.—Anton Dohrn (Naples).

An Albino Weasel.—On September 27th I was fortunate enough to obtain a pure white Weasel, full grown, a true albino, with pink eyes. It was killed by a dog in Soham Fen, Cambridgeshire, on the 17th of the month, and has been very well set up by Mr. John Baker, naturalist, of Cambridge. This variety is so rare in England that I think it worth recording. I have never seen a true albino Stoat. Were such a variety procurable I am convinced it would be entirely white to the tip of the tail.—Frederick Bond (Staines).

The Great Skua.—In May and June this year a friend and I were in the Shetland Islands, chiefly for the purpose of collecting eggs. We had the gratification of seeing the Great Skua in its haunts, and it is almost worth the journey to see this bird alone; especially interesting because so soon likely to become extinct as a breeding bird in Britain. Had Mr. Saxby been living, he would not have thought the light-house men most to be feared for its extinction; the circumstance I refer to was not in existence in his time. As is well known to naturalists, there are only two places in Britain where it now breeds, Unst and Foula. In one place I do not think we saw more than five or six birds, though the shepherd, who is daily on the hills, thinks there may be five or six pairs. From circumstances which came to my knowledge, but to which I cannot give full publicity, one of these is likely to know the birds no more in a very short time. You will appreciate the danger when you understand that, previous to this year,

nobody in the locality I am speaking of knew how to drill and blow the eggs; but now a person well able to get the eggs is going to do so, and will blow them and keep them by him to sell to visitors who may come at any time of the year. There are but few visitors in the early part of the year, May and June, when the birds are breeding, so they have not been much molested by strangers. Money is scarce with the poor people up there; so that, now they know how to keep the eggs until visitors come, you may guess what chance the few remaining birds will have of hatching. I need not describe the beauty of the bird, nor its flight, nor its boldness in defending its nest from intruders. Its courage in swooping down at persons to within an inch of their heads must be the admiration of all naturalists, and is delightful to see, but this very boldness might easily lead to its destruction. On a late occasion some persons got permission to shoot a pair of Arctic Skuas, but the Arctics were not the only ones they took away with them, "because they came falling down somehow"! So I was informed. I think—as no doubt will everyone who has ever seen the bird—it would be a pity, a great loss indeed, should the birds become extinct from man's cupidity. One of the best ways to secure its preservation would probably be to increase the number of breeding places. I know of two suitable places, Hascosea and Noss; there may be another or two known to some of your readers. Lonely places they must be where the Arctic Skua breeds! The plan I would propose is to get twenty or thirty Great Skua's eggs, and cause them to be hatched by Arctic Skuas; then the young birds would return to breed in the same places, for it seems the Skuas are greatly attached to their breeding haunts, and will not forsake them nor leave them except they are fairly driven away or killed. Now if they could be established in three or four other good places, where perhaps some arrangements might be made for their protection (such as, I think, Mr. Micklejohn would make for Noss) the birds might become numerous again. It would probably take two months or more to get the eggs from Iceland,—to make arrangements and take care of the eggs whilst hatching,—and, as there would be considerable expense, I should be glad to help in the matter. It is hardly to be expected that anyone would undertake it unaided. From my own experience, however, in carrying out a similar plan with Owls, I am sure it might be managed by a suitable person, knowing what to do and how to do it, and having time at his disposal. If some enthusiastic naturalist would undertake to carry out the plan next year—some one you thought would succeed—perhaps you would receive the subscriptions of those who would like to contribute to the preservation of this bird from extinction in the British Isles. I think perhaps £20 would serve to get the eggs from Iceland and other extra expenses. I commend the matter to the consideration of all those who would like to preserve our rarer British birds.—W. Purnell (Bell Street, Henley-on-Thames).

Grebes occurring in the Færoe Islands.—In some notes on "The Birds of the Færoe Islands," published by me in 'The Zoologist,' 1872, page 3256, a mistake occurs in the scientific name of one of the Grebes recorded in that list. The Horned or Sclavonian Grebe, *P. cornutus* (Gmelin), is a tolerably common autumnal and winter visitor to the group. I have, or had, a specimen captured in October, 1871—the one referred to in my above-quoted notes—and another captured in March, 1873, near Thorshavn; Mr. Hargitt has two or three specimens in his collection, and Müller writes of it as being a common autumnal visitant to the Færoe Islands, though it does not breed there. No specimen of the Eared Grebe, *P. nigricollis*, as far as I am aware, has been obtained in Iceland or the Færoes. The trivial name given in my list (page 3256 of the volume for 1872), viz., "Sclavonian Grebe," is correct; but the scientific term, *P. nigricollis*, is incorrect, and should be *P. cornutus* (Gmelin).—H. W. Feilden.

Manx Shearwater in Oxfordshire and Northamptonshire.—In his note to 'The Zoologist' (p. 426) on the Manx Shearwater, Lord Lilford remarks, "The weather that can drive such a hardy sea-rover as a Shearwater some forty miles inland at this time of year is certainly very exceptional." It is, however, worthy of remark that this is not the first time that the Manx Shearwater has been obtained in our district in September. In 1839 Mr. Goatley, of Chipping Norton, records, at p. 2625 of 'The Zoologist,' that he captured one alive in September of that year. In 1878, at p. 135, of this periodical I noticed one in my possession caught, alive, at Chipping Norton in the winter of 1872-73. At p. 220 of the volume for the same year I recorded two instances—one at Framington, Oxfordshire, in September, 1877; the other at Chacombe, Northamptonshire, date of capture unknown. Another was shot at Wroxton, near Banbury—I am not sure at what season of the year, but I fancy in the winter. In Plot's 'Natural History of Oxfordshire' is the following note:—"The Cormorant has been observed to come hither about harvest time, whereof there was one killed from St. Mary's steeple (tired with a long flight), an. 1675, and another young one taken up in Arncot field, fallen down in the corn, and brought me to Oxford." Mr. J. H. Gurney, Jun., in a letter to me, of August 19th of this year, suggests that the young Cormorant which had fallen down in corn might have been a Manx Shearwater. If Mr. Gurney's supposition is correct, it will be noticed that from the mention of the corn we may conclude it also was obtained in August or September. Since writing the above, Lord Lilford has very kindly sent me an extract from his note-book concerning a second Manx Shearwater in Northamptonshire,—"Shearwater, caught feeding with chickens in Northampton, September, 1866,"—and adds, "This bears out your views of the prevalence of September occurrences of this species. I do not understand why Mr. Gurney should suppose that the

young Cormorant recorded in Plot's 'Natural History of Oxfordshire' as 'fallen down in the corn' should be a Shearwater." It is therefore to be remarked that out of six or seven Shearwaters captured in the two counties no less than four occurred in the month of September.—C. Matthew Prior (Bedford).

Uncommon Birds at Barmouth.—On September 13th, whilst walking along the shore at Barmouth, Merionethshire, I observed six or seven birds sitting on the water a long distance from land, which, by the aid of a good pocket telescope, I discovered were Common Scoters. I was afterwards informed that there have been a good number of them about. A pair of Great Northern Divers were several times seen during the winter on the Barmouth Island, but—fortunately for them!—they were exceedingly difficult to get near. I picked up a Manx Shearwater in a dying state some distance from the town, at high-water mark, and was shown another which had been picked up dead almost in Barmouth itself.—J. Backhouse, Jun. (West Bank, York).

Green-backed Porphyrio at Barton.—The Green-backed Porphyrio (*Porphyrio smaragdonotus*, Tem., *P. hyacinthinus*, Brehm, jun., nec Tem.) has occurred, for the third time in Norfolk, on August 23rd, on Barton Broad, the same locality which produced the last. The specimen is at present in the hands of Mr. T. E. Gunn, of St. Giles' Street, Norwich, who informs me that it was a female, with eggs about the size of hemp-seed, and weighed one pound seven ounces. It does not show the slightest traces of confinement, and I have little doubt it was a migrant hither. The species is found as near as the North of Egypt. When in that country, in 1875, I met with it a few miles from Cairo. It has been confounded with the Purple Waterhen of the South of Europe (*Porphyrio hyacinthinus*, Tem.), and in all probability some of the examples of the Purple Waterhen which have been recorded as occurring in England belonged to the more southern green-backed species. Four specimens have been obtained in Norfolk, but there is good reason for supposing that one of them—the example recorded at Hickling—was an escaped bird; the other three appear to have been all wild.—J. H. Gurney, Jun. (Northrepps, Norwich).

Spotted Crake in County Down.—I have just received (October 15) a fine specimen of the Spotted Crake, which was shot by Mr. Frank Thompson, at Banbridge, Co. Down. It is curious that the last recorded Irish specimen was killed by another pupil of mine, Mr. G. E. Armstrong, about two years since. This bird has only fallen under the notice of Mr. Williams, the naturalist here, three times within the past ten years, and I have never myself been fortunate enough to observe it. I do not remember to have noticed it in the fine collection of Dr. Burkitt, of Waterford, which contains many rarities, including one specimen at least

which that well-known ornithologist is unable to identify. This year has been a very barren one for many observers in Natural History, and my gleanings have been much fewer than in former years.—Charles W. Benson (Rathmines School, Dublin).

Uncommon Birds in Nottinghamshire.—A Common Buzzard was shot, on the 15th September last, at Rufford. Early in the same month, as some workmen at Nottingham were one morning proceeding to their work, they came across two Shags, or Crested Cormorants, flapping about in Cross Street, and after an exciting chase caught them both. They were taken to T. White, birdstuffer, who tells me they dived for fish in his tank, eating several; he kept them alive for two days, but, finding they "did not look like living," killed and stuffed them. I have purchased them for my collection. Another was caught in a street close by, and a fourth was shot on Mapperly Plains. They were all young birds, possibly from the same nest, and having wandered away, got lost; or they may have been driven inland by a gale. Two male Common Scoters were shot on Thornton Reservoir, near Leicester, on the 18th September, and forwarded to me. Thornton Reservoir is four miles from Bosworth Field, which is about the centre of England.—J. Whittaker (Rainham Lodge, near Mansfield).

Distribution of the Carrion Crow.—Allow me to point out a slight inaccuracy in your 'Handbook of British Birds.' It is there stated that the Carrion Crow is rare in the Eastern Counties. I think Essex is certainly an exception, as it is fairly common about here; and for some miles round Felsted, where I was at school, there was scarcely a wood where the nest of this bird might not be found. My brother only left last year, and he always found a great many eggs of the Crow as well as of the Sparrowhawk and Kestrel, and the year before last found a Hobby's nest with four young ones.—M. Vaughan (Finchingfield, Braintree).

[The statement referred to was founded on the observations of several well-known naturalists in the Eastern Counties. See Stevenson's 'Birds of Norfolk,' vol. i., p. 258.—Ed.]

Immigration of Rooks and other Birds at Harwich.—On October 16th thousands of Rooks, Hooded Crows, Jackdaws, Starlings, and Sky Larks were seen coming in from the sea—the first migration observed this season. A Spotted Crake was picked up dead on the railway-line, having flown against the telegraph-wires. On the 12th October a specimen of Richardson's Skua, in immature plumage, was shot on the Dovercourt shore; and, at the same place, a Snow Bunting was procured on the 14th.—F. Kerry (Harwich).

Grey Phalarope in Bedfordshire.—A specimen of the Grey Phalarope was shot on October 6th by a farmer at Beeston, near Tandy,

in this county. It was rapidly assuming its winter dress. It was observed swimming about on a pond, and, as is usually the case, was remarkably tame. One was also obtained near here during the memorable immigration of this species in the autumn of 1866.—C. Matthew Prior (Bedford).

Variety of the Sanderling.—On the 28th August I and a young friend observed a small white bird flying in a flock of about twenty others on the sands near Holy Island. We watched them settle, and approached the flock from different directions, having both agreed to shoot at the white bird when the flock rose. One bird only fell, which I picked up, an old Sanderling; the white bird "singled" from the flock flying a short distance on my friend's side, and when it rose again he killed it. It proved to be a Sanderling, but very curiously marked and in perfect feather, nearly all white; the centre of the head cream-colour, shaded to white, gradually and evenly marked there as elsewhere. The back is pale buff, and the outer edges of the outside primaries are rich cream-colour; an even dusky brown V-shaped mark on the back, and the other parts quite white; the beak and legs olive. It was very fat, and it was no easy matter to keep it clean. However, with great care, I set it up, and it is now as clean as can be. Sanderlings were common about this date. The old birds first arrive in August in flocks by themselves; they pass on, I presume, for I never see them after the end of the month, when the young birds arrive. They keep in separate flocks, and after a few days they also appear to pass on, for they are afterwards only met with occasionally.—C. M. Adamson (North Lesmond, Newcastle-on-Tyne).

Shore Birds on the Norfolk Coast.—On September 21st Mr. Gunn had a male Grey Plover, with a black breast only slightly broken up with white, from Yarmouth, which is a late date for it to have retained its summer plumage. A good many Knots and a few Pigmy Curlews have been shot at Blakeney during the last week. The Knots were like skeletons, having no fat at all upon them, while Sanderlings and Dunlins shot at the same time were in good condition. One Pigmy Curlew shot on the 18th, by Mr. Ford Barclay, had a cockle on its foot: the bird had evidently trodden on it when open, and been caught. A Tern was caught some years ago, near Lynn, in the same manner by a mussel, and other similar instances have been recorded. On August 11th I received eleven Knots in three-parts red plumage from Happisburgh.—J. H. Gurney, Jun. Northrepps, Norwich).

Supposed Nesting of the Redwing near York.—Whilst out shooting on August 27th I killed a bird which, in the dim evening light, looked like a Thrush, but on examining it next day I found it was a young Redwing (moulting). The body was a good deal shattered, but the head was untouched, and showed the whitish line above the eye very well. The

colour under the wing also was very deep. Does not this clearly prove that a pair of Redwings have bred in the county, owing probably to the severity of the weather in the early part of the year?—J. Backhouse, Jun. (West Bank, York).

Bee-eater in Derbyshire.—On the 4th May last a pair of these beautiful birds were shot in the gardens of Stainsby House, near Derby, by James Hawkins. They were flying round some apple and cherry trees which were in blossom. The birds were in fine plumage, but rather damaged by the shot. One was purchased for the Nottingham Museum, and I obtained the other.—J. Whittaker (Rainham Lodge, near Mansfield).

Reported Nesting of the Golden Eagle in Shetland.—While staying at Kirkwall, last August, I was informed by a gentleman, who had just returned from a tour in the Shetlands, that the Golden Eagle had nested and brought off its young on the island of Bressay, notwithstanding the repeated attempts of a shepherd there to shoot it. I made a point of asking whether it might not have been the White-tailed Eagle, but my informant seemed perfectly satisfied that it was the Golden Eagle. I should feel much obliged if any of your readers could give me any further particulars, as I cannot help feeling that it is far more likely to have been the White-tailed Eagle.—M. Vaughan (Finchingfield, Braintree).

[The late Dr. Saxby, long resident in Shetland, was unable to obtain any satisfactory evidence of the Golden Eagle breeding there.—Ed.]

Coronella lævis in Dorsetshire.—I captured a fine example of this rare Snake on Bloxworth Heath yesterday, September 26th. Although I am very frequently walking about and entomologising on the heath, at all seasons of the year, it is now six or seven years since I obtained a specimen of it (Zool. 1872, p. 3113). The length of the example now recorded is exactly two feet.—O. P. Cambridge (Bloxworth Rectory).

Boar-fish off Plymouth.—Since my last note (p. 429) I have had some conversation with Plymouth fishermen on the subject. They tell me that within a few years these fish have swarmed to such an extent as to have become a perfect pest, and that in many instances the trawlers have actually been obliged to change their fishing grounds in order to be out of their way. Indeed such immense numbers often get into the trawls, and and so great is their weight, that they are obliged to cut a large hole in the net to let them escape, together with all the more valuable fish they might have taken besides, finding it almost impossible to lift such a great bulk on board without carrying away their gear. On my telling one of these men that

the proper name was "Boar-fish," he answered, "And a proper name for 'em, too, sir, for they be proper bores to us fishermen; but we always calls 'em 'Cuckoo-fish.'" It certainly seems remarkable, and worthy of notice, that a Mediterranean fish considered rare not many years since should now appear on our coasts in such countless numbers.—JOHN GATCOMBE (Durnford Street, Stonehouse).

DEATH OF PROFESSOR GARROD.—It is with much regret that we have to announce the recent death, from consumption, of Professor A. H. Garrod, F.R.S., whose loss will be much deplored by all workers in zoological and anatomical science. In his capacity as Prosector to the Zoological Society, Prof. Garrod had opportunities as an anatomist which fall to the lot of but few, and how well he turned those opportunities to account is best known to those who have studied the result of his researches, as embodied in the many valuable papers contributed by him to the 'Transactions' and 'Proceedings' of that Society. For some time prior to his death, Prof. Garrod had been engaged upon a much-needed work on the Anatomy of Birds, in furtherance of which he was elected to share in the Royal Society's grant in aid of Scientific Research; but his failing health causing great anxiety to his friends, he was recommended to desist from work, and spent some time in the South of France in the hope that he might recover. This hope, alas! has proved vain, and the scientific world now deplores the death, at an early age, of one of the most clever and earnest workers of the day. His readiness to answer questions and impart information on the subjects of which he was so good a master will be long gratefully remembered by all who have had occasion, at one time or other, to seek his assistance. The announcement of his death only reaching us as these pages were going to press, we regret that we have been unable, in the short time at our disposal, to furnish, as we should otherwise have done, a complete list of Professor Garrod's publications.

PROCEEDINGS OF SCIENTIFIC SOCIETIES.

ENTOMOLOGICAL SOCIETY OF LONDON.

September 5, 1879.—J. JENNER WEIR, F.L.S., F.Z.S., Treasurer, in the chair.

Mr. Philip B. Mason exhibited specimens of *Harpalus oblongiusculus*, Dej., taken in August, 1879, at Portland. One specimen had been captured there last year by Mr. Harris; but at least a score had now been taken in this locality, thus confirming the claim of this species to a place in the British list. Mr. Mason also exhibited, on behalf of Mr. Gameys,

of Repton, specimens of *Euplectus ambiguus*, Reich., showing the difference between this and the var. "*duplo minor*" described by Thomson. The variety exhibited, which has not been before recorded in Great Britain, was taken at Repton in flood refuse during the late spring.

Miss E. A. Ormerod exhibited specimens of *Calandra palmarum*, forwarded by Mr. D'Urban, of Exeter, as examples of the injury caused by the so-called "cane-borers" to the sugar-canes of Demerara. One piece showed the commencement of the attack, "the preparatory holes made for it to insert its eggs" (as stated in observations from the colony); the second shows the complete destruction of the inside fibre of the cane, and in the third piece the cane was completely hollowed out. Miss Ormerod remarked that these specimens were accompanied by two living larvæ of the cane-weevil, which formed their cocoons whilst on the way, and availed themselves for the purpose, of the packing material; the inside of the cocoon being, as usual, of fine cane-fibres, but the outside consisting, in one case almost entirely and in the other partially, of the straw or grass (still with a few empty ears on it) in which the cane was packed. The difference in material is rather interesting, as it affords means of tracing the method of plaiting and arranging longitudinally as well as twisting the fibres. The pupa was found to be dead shortly after receipt, and was shown with the cocoon from which it was removed. A single specimen of lepidopterous pupa was also sent over, lying in the central gallery it had hollowed in a small cane-shoot little more than a quarter of an inch in diameter. This pupa was singularly active when received, moving at will for about an inch along its gallery; but though placed in an evenly warm and moderately damp atmosphere, and left undisturbed, excepting occasional examination, it appeared to be dead. The report of the Managers of the Great Diamond Plantation furnishes some good notes, in few words, of the general characteristic of the attacks of the three chief cane-borers:—1st. The lepidopterous larva (presumably of the *Proceras*) has only been found hitherto in growing canes and above ground. 2ndly. The larva of the *Calandra palmarum* is found in rotten canes; cane tops after they are old, though still growing; and in the stools below ground. The cocoons in which these insects lie in the chrysalis state are nearly always to be found at the extremity of the cane top deepest in the ground 3rdly. The larva of the *Calandra sacchari*, which is distinguishable from the *C. palmarum* by its smaller size and colouring of dark brown and yellow ochre, instead of black, but similar in habits, and in forming an intricate and strong cocoon woven of fibre to protect it whilst in the pupal state. With regard to the cutting out of infested cane, and the value in product paying expenses, it is noted:—"Besides burning, a gang of men has been employed cutting out such young canes as show signs of the attack of the insects, and these have been thrown into canals and sunk under water. A good many insects are killed in this way, but a great many escape.

In dry weather it might be preferable to make them into heaps on the downs, and, after being allowed to dry a little, covered with dry trash or grass and burnt. This cutting out was commenced some six weeks ago; and during that time 246 acres have been gone over, and although experience is so short, it may be safely said that the young cane-stumps look stronger than they have done for a long time past, although they have had very dry weather on them lately. Fifty punt loads of tops and water-sprouts, which had shown signs of the attacks of the borers, have been brought home and ground, and the juice showing a density of 1042½, after being neutralized by lime, was set up and distilled. Sufficient rum and megass were obtained to pay all expenses." Ants are of very great service, as they devour the insects when in the chrysalis state, and it is satisfactory to notice that they are on the increase. It is evident that to burn fields in which the small red or black ants are to be found in abundance is a mistake, as large numbers of the best friends of the canes must inevitably be destroyed by the fire. To entice ants and other insects known to be antagonistic to grub-life is of vital importance, and no trouble should be spared in getting them into the cane-fields.

Mr. M'Lachlan stated that the lepidopterous larva proving so destructive was probably no other than that of the moth noticed by Fabricius in 1794 as "*Phalæna saccharalis*," and which had been commonly noticed since his time in various West Indian and South American plantations. He agreed with Miss Ormerod that the only probable means of lessening the amount of damage was to be sought in the practice of uprooting and burning all infested canes the moment they showed signs of the presence of the larva; not by burning them on the ground, but by collecting them and destroying them by fire outside the plantations, by which means the risk of destroying the natural enemies of the borer would be avoided. From the accounts just read it appeared probable that the *Calandra* only came in after the canes had been rendered unhealthy, or were destroyed, by the larva of the moth, and thus acted the part of scavengers, completing the work commenced by the moth.

Mr. Jenner Weir exhibited a pair, male and female, of *Cicada montana*, taken in the New Forest, in July, 1879.

M. Ch. Oberthur communicated the following paper:—"Observations sur les Lépidoptères des îles Sangir et descriptions de quelques espèces nouvelles." Coloured drawings of some of the new species described were exhibited.

October 1, 1879.—Sir John Lubbock, Bart., M.P., V.-P.R.S., President, in the chair.

The President first alluded to the loss which the Society had sustained by the death of Mr. William Wilson Saunders, F.R.S., who had been President in 1841, 1856 and 1857.

The President then announced that Lord Walsingham, in conjunction with other gentlemen, had placed at the disposal of the Council the sum of £100, to be awarded in two prizes of £50 each for the following subjects:—

1. The best and most complete life-history of *Sclerostoma syngamus*, Dies., supposed to produce the so-called "gapes" in poultry, game, and other birds.

2. The best and most complete life-history of *Strongylus pergracilis*, Cob., supposed to produce the "grouse disease."

No life-history would be considered satisfactory unless the different stages of development were observed and recorded. The competition was open to naturalists of all nationalities. The same observer might compete for both prizes. Essays in English, German, or French were to be sent to the Secretary of the Society on or before October 15th, 1882.

Mr. M'Lachlan said that, with the greatest respect for the liberal offer made to the Society by Lord Walsingham, he nevertheless considered the Council had not held sufficiently in view the objects for which the Society was instituted when they entertained his offer. The Society was now (as almost always) languishing for want of funds sufficient to enable it to efficiently carry out its purpose—the advancement of entomological science; and he thought that if this were properly brought under the notice of Lord Walsingham he might be willing to modify his offer so as to bring it within the scope of the aims of the Society. By accepting the offer as it stood he thought the Council had exposed the Society to the risk of ridicule. The subject belonged more properly to the Linnean or Zoological Societies. It was true that the subjects in which the Society was specially interested did not consist exclusively of Insects, but they were limited to that division of the Animal Kingdom classed under the comprehensive term *Arthropoda*, and in no case could the *Entozoa* come within that division.

Mr. Stainton remarked that when he heard an announcement made from the chair, in which the Latin names of the species occurred, he fully expected that, for the information of the younger members who were present, the President would have stated to what order of insects they belonged. If the creatures in question were not insects, he could not conceive what the Entomological Society had to do with them. Insects, Crustacea, Arachnida, and Acari came properly under the charge of the Society, but the Entozoa were quite foreign to its scope, and fell more strictly within the province of the Linnean or Zoological Societies, with which latter Society he believed Lord Walsingham to be connected. It was a case he considered of *ultra vires*, and when he used that expression he was in hopes that he should induce a lawyer whom he saw present to rise and say a few words on that text.

Sir John Lubbock stated that the offer for these prize essays had first been made to him by Lord Walsingham, and, as President of the Society,

he did not take upon himself to refuse what appeared to him a valuable opportunity of extending the knowledge of an obscure group of Annulosa, but had forwarded the letter to the Secretary, to be laid before the Council, by whom the offer had been accepted. He fully agreed with Mr. M'Lachlan and Mr. Stainton that these entozoic parasites could in no way be regarded as coming within the scope of Entomology proper; but he was of opinion that in accepting Lord Walsingham's offer a useful precedent was established for receiving future support from others who might be disposed to extend similar aid to the investigation of subjects coming more strictly within the province of the Society. In conclusion, the President stated that the Council were in the hands of the Society, if any member chose to put the objections raised to the acceptance of the offer in question into the form of a resolution.

Mr. Stainton said that he had no intention of moving any resolution on the subject. He thought the Council was the proper body to deliberate on the matter; but if a suggestion were made to Lord Walsingham that the development of Entozoa was a subject which came very properly in the province of the Zoological or Linnean Societies, but that to the Entomological Society the matter was altogether foreign, his lordship would be found quite ready to transfer his proposal to one of those Societies.

Mr. Pascoe observed that the subject was one which should be settled entirely by the Council.

Mr. C. O. Waterhouse remarked that in accepting this offer the Council could not be considered to have claimed for the Society any special knowledge of the subjects proposed for competition; they were simply placed in the position of having to award a certain sum placed at their disposal for essays, the quality of which they would be at liberty to refer for determination to any competent authority, whether in the Society or not. If the prizes had been offered by the Council, or to members of the Society only, there would have been good grounds for objecting to their acceptance, but as the competition was open to any person, whether a member of the Society or otherwise, the Council were only the means of communication between Lord Walsingham and the essayists, to which no objection could be raised.

Mr. Philip Henry Gosse, F.R.S., of Torquay, Devonshire, was ballotted for, and elected an Ordinary Member.

Mr. M'Lachlan exhibited specimens of an Hemipterous insect just received from a gentleman residing near Canterbury, and which, it was stated, was causing great damage to hops, being known to the growers as the "needle-nosed flea." It was stated that hitherto it had only appeared in a restricted area, but this year it occurred over many acres. The insect proved to be *Anthocoris nemorum*, and Mr. M'Lachlan suggested that it was on the hops in search of Aphides or other small insects, its habits being carnivorous, so far as is known. Hence the hop-growers were possibly asking advice as to the destruction of what might be one of their best friends.

Mr. M'Lachlan also exhibited examples of the larvæ of one of the *Embidæ*, found by Mr. Wood-Mason at Jubbulpore on his return to Calcutta, crawling on the ground in the open, and also occurring under loose bricks; the latter habit being quite in accordance with that most generally attributed to the family, although one species (*Oligotoma Michaeli*, M'Lach.) had been found in a hot-house near London, in all its stages, and apparently injuring orchids. The species sent by Mr. Wood-Mason was probably *Oligotoma Saundersi*, Westwood.

Mr. M'Lachlan further called attention to the sculptured stones on the shores of Lake Léman, alluded to at two previous meetings, and which it had been suggested by Prof. Forel might be merely due to the action of trichopterous larvæ, apparently those of *Tinodes wæneri* (*larida*, Curtis). Mr. M'Lachlan had recently examined multitudes of these stones on the shores of Lake Neuchâtel, and under peculiarly favourable conditions, because recent engineering works had lowered the level of the Lake, and exposed many interesting phenomena. The stones, which (as in those of Lake Léman) were limestone, were very strongly sculptured, but in differing degrees, so as to lead one to suppose that all might not have been acted upon by the same agents, or that differences in the texture of the stone occasioned variety in the sculpturing. He was doubtful as to the ability of any trichopterous larvæ to occasion the sculpturing, and thought it more probable the result of the work of Mollusca, but there still remained much uncertainty as to its exact nature.

Mr. Waterhouse, with reference to injury done to hops, stated that he had recently inspected a hop garden in Sussex, in which great mischief had been done by a species of Homopteron (*Euacanthus interruptus*), probably assisted by an Hemipteron (*Lygus*). These punctured the leaves in which holes were afterwards formed, so that the surface was destroyed, and the supply of nourishment to the plants thus prevented. He was of opinion that *Euacanthus* was likely to have been the cause of the damage complained of by Mr. M'Lachlan's correspondent.

Mr. Pascoe exhibited an apparently new genus and species of *Acridiidæ*, remarkable for its aquatic habits. It was seen in some numbers hopping about on the surface of a pool near Pará.

The Rev. A. E. Eaton exhibited larvæ, pupæ, and cases of *Hydroptila* (restricted) collected near Val d'Illiéry, Vallais, and Sixt, Haute Savoie.

Sir John Lubbock exhibited a specimen of *Orchesella rufescens*, taken in Kent, being a species of *Colembola* new to Britain.

Mr. E. Boscher exhibited a coloured drawing showing the extreme forms of two varieties of the caterpillar of *Smerinthus ocellatus*, found feeding respectively on *Salix viminalis* (osier) and *S. triandra* (French willow).

Mr. Wood-Mason communicated a note "On the Specimens of *Narycius* (*Cyphonocephalus*) *smaragdalus*, figured on Pl. I., fig. 3 (male), fig. 4 (female), of Trans. Ent. Soc. 1878."

Mr. J. S. Baly communicated "Descriptions of Phytophagous Coleoptera belonging to the Families Chrysomelidæ and Galerucidæ, from Peru."

Mr. A. G. Butler communicated "Descriptions of two new Lepidoptera of the Family Sphingidæ."

Mr. C. O. Waterhouse read "Descriptions of two new Genera and Species of Coleoptera from Madagascar, belonging to the Families Tenebrionidæ and Cerambycidæ." Mr. Waterhouse also read a paper "On the Affinity of the Genus *Polyctenes*, Westwood, with a Description of a new Species."—R. Meldola, *Hon. Secretary*.

NOTICES OF NEW BOOKS.

The Capercaillie in Scotland. By J. A. Harvie Brown, F.Z.S. 8vo, pp. 155. Edinburgh: Douglas. 1879.

This book was well worth writing, and Mr. Harvie Brown has written it well. We could have wished that while he was about it he had told us a little about the former existence of the Capercaillie in England, since there can be little doubt that it was once an inhabitant of our ancient pine-woods, a surmise which is strengthened by the fact that the Britons had a name for it, "Ceiliog Coed," and that its bones have been found amongst Roman remains at Settle. We have met with old grants (circa 1343—1361) of land, in the county of Durham, held by the tenure *inter alia* of paying "one wode-henne yerely" to the Bishop of Durham for the time being, indicating pretty clearly the "Ceiliog Coed," or Capercaillie.

But it was in Scotland, of course, that, prior to its extinction and reintroduction, it had its chief stronghold; and it was to be expected that Mr. Harvie Brown's remarks would relate chiefly to its history in that part of the British Islands where alone it is to be found at the present day. After examining the evidence concerning its extinction in Scotland during the latter half of the last century, he arrives at the conclusion (p. 28) that "in the absence of distinct data it is safer to accept the date of 1760 as that of the extinction of the original stock in Scotland." About the same date we are told it became extirpated in Ireland, the last survivors, according to Pennant, having been found at Thomastown, in Tipperary. In regard to its last haunts in England and Wales we are at present left in the dark.

Of the causes of the extinction of the species in Scotland Mr. Harvie Brown says but little. "The most likely factors" he believes to be "the probable destruction of great forest tracts by fire, the cutting down of the same by man as late as the days of Cromwell, and the wasting of the forest from natural causes, by the conversion of dry forests into bogs and morasses, and resulting from this the decrease of, and change in, the food of the species."

Rutty, in his 'Nat. Hist. of the Co. Dublin,' 1772, speaks of the Capercaillie as having been seen in the County Leitrim about the year 1710, but adds, "They have entirely disappeared of late *by reason of the destruction of our woods*."

In 1827 or 1828 an attempt was made by the Earl of Fife to reintroduce this fine game-bird at Mar Lodge, but unfortunately the experiment did not succeed. A few years later, however, *viz.*, in 1836, through the instrumentality of the late Sir Thomas Fowell Buxton, and the co-operation of that fine old sportsman, the late Mr. Lloyd, of Scandinavian renown, a number of these birds were imported from Sweden, and turned out in the woods at Taymouth. The actual rearing by hand was not so successful, but in 1841 favourable reports were received of the successful hatching of eggs under grey hens, principally in the woods of Drummond Hill. They soon became fairly established, and about the year 1862 or 1863 the Marquis of Breadalbane estimated their numbers on the estate at over 1000 birds, while the head-keeper, who tended the birds with the greatest possible care, considered that there were over 2000.

At Taymouth, and all along the Tay Valley, as far as Dunkeld, Capercaillies, after becoming fairly established, increased in numbers rapidly for a number of years. The whole district was in every way admirably adapted to their habits, the Duke of Athole and Lord Breadalbane having planted considerable areas of their estates in the latter part of the last century, and in the beginning of the present one, with larch, Scotch fir, and spruce, thus forming for the restored birds the perfection of cover and food.

Mr. Harvie Brown has been at considerable pains to trace the direction in which the progeny of this new stock spread from the head-quarters at Taymouth; and by means of a circular, which he distributed amongst the principal land-owners of east-central

Scotland, and which was responded to in a very liberal spirit, he has been enabled to furnish some interesting particulars concerning the gradual increase and present distribution of the species. The evidence thus collected is arranged methodically and clearly, while a small map exhibits at a glance the districts (coloured red) wherein the Capercaillie may now be found.

The author's concluding remarks on the damage which the bird does to young trees by feeding on their growing shoots, and in its alleged hostility to the Black Grouse, are not the least valuable portions of his essay.

The Spiders of Dorset; with an Appendix containing short Descriptions of those British Species not yet found in Dorsetshire. By the Rev. Octavius Pickard Cambridge, M.A., &c. From the 'Proceedings of the Dorset Natural History and Antiquarian Field Club,' edited by Professor James Buckman, F.G.S., F.L.S. Vol. I. 8vo, pp. 235, with three plates. Sherborne: L. H. Ruegg. 1879.

Had this volume consisted of a mere catalogue of the species of *Arachnidæ* found in the county of Dorset we should have experienced some difficulty in expressing an opinion on its merits, for want of that special knowledge of a subject on which Mr. Pickard Cambridge is perhaps the best authority at the present day. The very excellent introduction, however, with which the volume is prefaced, takes it completely out of the category of mere lists of species, and furnishes material for a more lengthy *critique* than we can at present, for want of space, afford. In a future number we shall hope to deal with it more fully, and give some extracts from the pages of our author on a subject which hitherto seems to have attracted but little attention amongst naturalists. In the meantime it must suffice if we direct attention to the appearance of this recently-published volume, and recommend to our readers the perusal of the "Introduction" in its entirety. It furnishes an amount of information, clearly and intelligibly conveyed, which many, we feel sure, would be glad to possess did they know where to look for it.

As the Spiders found in Dorsetshire include upwards of two-thirds of those as yet known to be British, and as an appendix

will furnish a supplemental list with short diagnoses of the species not yet discovered within the limits of the county, the monograph, when complete, will include all the known British Spiders. Mr. Blackwall's large volume, published by the Ray Society in 1861—64, records 304 species; the present work already includes 510, and fresh additions are constantly being made to this total by the author and his fellow-workers in this special field of observation.

Transactions of the Norfolk and Norwich Naturalists' Society, 1878—9. Norwich: Fletcher & Son. 1879.

The last part issued of these 'Transactions' (vol. ii. part v.) contains several papers of unusual interest, of which we may specially notice that by Mr. Southwell on "Norfolk Decoys." It will probably surprise many of our readers to learn that, in this county alone, Mr. Southwell has ascertained the former existence of no less than twenty-three decoys, while at the present day there are six still in working order. The statistics collected concerning the site and dimensions of these decoys, and the numbers of fowl annually taken, are very curious, and have furnished the writer with materials for an article which is interesting alike to sportsmen and naturalists. Under the head of "The Gannet City," Mr. J. H. Gurney, jun., gives an account of the Bass Rock and its feathered inhabitants from recent personal observation. No less than 1000 Solan Geese are said to be taken here annually, and the plucking is carried on by five or six women who are employed daily throughout the season at one shilling and sixpence a day each. The feathers are used for beds, and the eggs are taken for food. There are other sources of profit, however, besides the Gannets; Rabbits are plentiful, and the guano-grown grass affords capital pasturage for a score or so of sheep. So that the lessee who farms the rocks for the modest rent of twenty pounds a year from the owner, Sir Hugh Dalrymple, apparently makes a good thing out of it.

Mr. Cordeaux contributes "Some recent notes on the Avifauna of Lincolnshire," in which he compares the present condition of his county as regards the range and distribution of certain species with its former aspect as depicted by Pennant and Montagu, and

some of the older historians; while Mr. Stevenson, in his "Ornithological Notes," keeps us well informed of the latest news concerning birds observed in Norfolk.

The Society may well be congratulated on the publication of so many interesting papers as appear in the present part of these 'Transactions.'

A Dictionary of the Thames from Oxford to the Nore. By Charles Dickens. Sm. 4to., pp. 268. London: published at the office of 'All the Year Round,' 26, Wellington Street.

Uniform in size with his 'Dictionary of London,' Mr. Dickens has just published a 'Dictionary of the Thames,' with maps of the river in sections. Its claim to be noticed in these pages rests upon the fact that in addition to the information usually supplied by guide-books, topographical, archæological, historical, and otherwise, it contains a good deal of Natural History. Articles on the Geology, Botany, and Ornithology of the Thames Valley, written by well-known specialists, will be found under these separate headings, and the Fishing is discussed both generally and in detail, the following species being separately treated:—Barbel, Eel, Gudgeon, Perch, Pope or Ruff, Roach, Salmon, Shrimps, Sturgeon, Trout, and Whitebait. The remarks on Thames Salmon will be found of special interest, particularly, of course, to anglers. The expulsion of this fine fish from the river dates apparently from the opening of the docks at the commencement of the present century. Faulkner, in his 'History of Fulham,' 1813, writes:—"The Salmon caught here are highly esteemed, and sell from 5*s.* to 12*s.* per pound. Only one was caught here during the last season. They have abandoned the Thames since the opening of the docks."

Of the articles which do not relate to Natural History those headed "Art and the Thames," "Etymology of the Thames," and "Poets and Poetry of the Thames," are particularly interesting, and deserve special mention. We have no hesitation in saying that a better shillingsworth in the shape of a handbook to the river is not to be found.